

REMARKS

The Office action dated August 6, 2003 and the cited references have been carefully considered.

Status of the Claims

Claims 17 and 18 are new, reciting subject matter already disclosed in Paragraph 0019 of the original specification. Therefore, claims 1-4, 6-12, and 14-18 are pending in the current prosecution.

Claims 8 and 16 are allowed. Claims 3, 4, 11, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 3, 4, 11, and 12 have been rewritten in independent form to include all of the limitations of the base claims and intervening claims, if any. Therefore, claims 3, 4, 11, and 12 are now in condition for allowance. Early allowance is respectfully requested.

Claims 1, 2, 6, 7, 9, 10, 14, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over De Vrijer (U.S. Patent 4,319,157) in view of De Maagt et al. (U.S. Patent 5,986,405; hereinafter "De Maagt"). Claims 1, 6, 7, 9, 14, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Weinhardt (U.S. 6,043,603) in view of Hasenpusch et al. (U.S. patent 5,460,643; hereinafter "Hasenpusch"). The Applicants respectfully traverse this rejection for the reasons set forth below.

Comments on Certain Amendments to the Specification and Claims

The terms "silver salts" and "gold salts" in the specification and claims have been replaced with "silver compounds" and "gold compounds." No new matter has been added. Since the specification discloses oxide, which is not a salt, of silver and gold in addition to carbonate, halides, sulfide, and acetate of these metals, the terms "silver compounds" and "gold compounds" are a better representation of the disclosed compounds.

New claims 17 and 18 recite subject matter already disclosed in Paragraph 0019 of the original specification. None of the cite references discloses, teaches, or suggests the subject matter of claims 17 and 18, either singly or in combination. Therefore, claims 17 and 18 are patentable over the cited references.

Claim Rejection Under 35 U.S.C. § 103(a)

Claims 1, 2, 6, 7, 9, 10, 14, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over De Vrijer in view of De Maagt. The Applicants respectfully traverse this rejection because a combination of De Vrijer and De Maagt does not teach or suggest all of the limitations of each of claims 1, 2, 6, 7, 9, 10, 14, and 15.

"[T]he legal conclusion of obviousness [under 35 U.S.C. § 103(a)] requires that there be some suggestion, motivation, or teaching in the prior art whereby the person of ordinary skill would have selected the components that the inventor selected and used them to make the new device." *C.R. Bard, Inc. v. M3 Systems, Inc.*, 48 U.S.P.Q.2d 1225, 1231 (Fed. Cir. 1998). Thus, in order for the prior art to render the claimed invention obvious, all of the elements thereof must be taught or suggested in the prior art. "What must be found obvious to defeat the patentability of the claimed invention is the claimed combination." *The Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 U.S.P.Q.2d 1923, 1927 (Fed. Cir. 1990).

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." "All words in a claim must be considered in judging the patentability of that claim against the prior art." MPEP § 2143.03 (8th ed., rev. 1, Feb. 2003).

De Vrijer discloses a high-pressure mercury discharge lamp containing tin iodide, tin chloride, and tin bromide, all in a mixture with mercury vapor to produce a discharge that emits visible radiation. See; e.g., column 1, lines 61-68; column 2, lines 52-65. De Maagt discloses a high-pressure mercury discharge lamp that contains silver oxide disposed in the outer vessel of the lamp and not in contact with mercury vapor, which is contained in the inner vessel (please note that a high-pressure mercury discharge lamp has two vessels, one inside the other; and only the inner vessel contains mercury). The silver oxide is disposed at a location that allows its temperature to reach at least 340 °C so that it can decompose to produce oxygen. First, neither De Vrijer nor De Maagt discloses a low-pressure mercury discharge lamp, as recited in claims 1, 2, 6, 7, 9, 10, 14, and 15. Second, nowhere does De Vrijer or De Maagt teach or suggest a sealing compound that comprises a silver compound, a gold compound, or a combination thereof for attaching the lamp end cap to the glass envelope, as is recited in claims 1, 2, 6, 7, 9, 10, 14, and 15. Moreover, the purpose for using silver oxide in De Maagt's invention is to produce oxygen upon the

decomposition of silver oxide at high temperature to scavenge any hydrocarbon contamination in the lamp. Column 3, lines 1-5, 13-20. De Maagt never contemplates that silver oxide is used to tie up mercury to prevent the conversion of elemental mercury to soluble mercury compounds. De Maagt's invention clearly addresses a different problem from that of the instant invention. Therefore, De Maagt cannot be properly combined with any disclosure of a high-pressure mercury discharge lamp, such as that of De Vrijer, to render claims 1, 2, 6, 7, 9, 10, 14, and 15 obvious. *In re Wright*, 6 U.S.P.Q.2d 1959, 1961 (Fed. Cir. 1988) ("[I]t is the invention as a whole that must be considered in obviousness determinations. The invention as a whole embraces the structure, its properties, and the problem it solves, [viewed in light of the teachings of the prior art].")

Claims 1, 6, 7, 9, 14, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Weinhardt in view of Hasenpusch. The Applicants respectfully traverse this rejection because a combination of Weinhardt and Hasenpusch does not teach or suggest all of the limitations of each of claims 1, 6, 7, 9, 14, and 15. Moreover, Hasenpusch is in an entirely different field of endeavor from that of the instant invention. Therefore, Hasenpusch may not be combined with Weinhardt under 35 U.S.C. § 103(a).

"[T]he legal conclusion of obviousness [under 35 U.S.C. § 103(a)] requires that there be some suggestion, motivation, or teaching in the prior art whereby the person of ordinary skill would have selected the components that the inventor selected and used them to make the new device." *C.R. Bard, Inc. v. M3 Systems, Inc.*, 48 U.S.P.Q.2d 1225, 1231 (Fed. Cir. 1998). Thus, in order for the prior art to render the claimed invention obvious, all of the elements thereof must be taught or suggested in the prior art. "What must be found obvious to defeat the patentability of the claimed invention is the claimed combination." *The Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 U.S.P.Q.2d 1923, 1927 (Fed. Cir. 1990).

Moreover, "[i]n order to rely on a reference as a basis for rejection of an applicant's invention [under 35 U.S.C. § 103], the reference must be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1445 (Fed. Cir. 1991). "It is immaterial to the issue of obviousness that elements of the claimed invention exist in other contexts." *The Gillette Co. v. S.C. Johnson & Son Inc.*, 16 U.S.P.Q.2d 1923, 1927 (Fed. Cir. 1990) (emphasis added).

Weinhardt merely discloses a supporting element disposed in a low-pressure discharge lamp. The supporting element is coated with a mercurial coating and a getter material. See; e.g., abstract; column 1, line 66 to column 2, line 1; column 2, lines 15-17. Nowhere does Weinhardt disclose what the getter material is.

Hasenpusch discloses a method of cleaning up a gas stream by adsorbing mercury vapor on zeolite (an aluminum silicate) particles impregnated with silver nitrate. Nowhere in Weinhardt and Hasenpusch can one find a teaching or suggestion to provide silver compounds in a sealing composition for mercury vapor discharge lamps or to dispose a material comprising silver compounds at a base of mercury vapor discharge lamps, as is recited in claims 1, 6, 7, 9, 14, and 15.

Since a combination of Weinhardt and Hasenpusch does not teach or suggest all of the limitations of each of claims 1, 6, 7, 9, 14, and 15, these claims are patentable under 35 U.S.C. § 103(a) over Weinhardt in view of Hasenpusch.

Moreover, Hasenpusch is in a different field of endeavor from that of the instant invention because Hasenpusch does not deal with removing mercury from leachate. Furthermore, Hasenpusch removes mercury vapor, which must be elemental mercury (because only elemental mercury is volatile) while the instant invention prevents leaching of soluble mercury (elemental mercury of Hasenpusch is substantially insoluble). Therefore, one of ordinary skill in the art of lighting would not have looked to Hasenpusch's field of air pollution control for solution to the problem of preventing soluble mercury from leaching out of mercury discharge lamps. "[I]f [the reference] is directed to a different purpose [than that of the claimed invention], the inventor would accordingly have had less motivation or occasion to consider it." *In re Clay*, 23 U.S.P.Q.2d 1058, 1061 (Fed. Cir. 1992). And "[w]hen the incentive to combine the teachings of the references is not apparent, it is the duty of the examiner to explain why combination of the references teachings is proper. . . . Absent such reasons or incentives, the teachings of the references are not combinable." *Ex parte Skinner*, 2 U.S.P.Q.2d 1788, 1790 (B.P.A.I. 1986). Here, Hasenpusch is in a different field of endeavor, and thus, a person of ordinary skill in the art of lighting would not have motivation to look to Hasenpusch to solve his/her problem. Moreover, the Examiner has not put forth any convincing argument for why a combination of Weinhardt and Hasenpusch is proper in view of the fact that Hasenpusch is directed to a different problem. Thus, the Examiner has not satisfied the burden of proof established by *Ex parte Skinner*. Therefore,

claims 1, 6, 7, 9, 14, and 15 are patentable under 35 U.S.C. § 103(a) over Weinhardt in view of Hasenpusch.

In view of the above, it is submitted that the claims are patentable and in condition for allowance. Reconsideration of the rejection is requested. Allowance of claims at an early date is solicited.

Respectfully submitted,

Handwritten signature of Toan P. Vo in black ink.

Toan P. Vo, Ph.D.
Attorney for the Applicants
Registration No. 43,225
(518)387-6648

Schenectady, New York
October 29, 2003